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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,567	02/06/2002	Ichirou Miyagawa	Q67110	2642

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EXAMINER

CHOI, WILLIAM C

ART UNIT PAPER NUMBER

2873

DATE MAILED: 11/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,567

Applicant(s)

MIYAGAWA, ICHIROU

Examiner

William C. Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-10 and 13-20 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 11 and 12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 8, 13 and 17 (and dependent claims 3, 4, 9, 10, 14-16 and 18-20) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for the following reasons: the term "in the vicinity" in claims 2, 8, 13 and 17 is a relative term, which renders these claims indefinite. The term "in the vicinity" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For purposes of examination, the aperture was assumed to be disposed "at" a far field pattern position. Appropriate correction is required.

Claims 3, 4, 9, 10, 14-16 and 18-20 are rejected because they inherit the indefiniteness of the claims they depend from.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Genovese (U.S. 5,526,166) and further in view of Minoura (U.S. 4,390,235).

In regards to these claims, Genovese discloses an optical system for use in scanning a surface (Figure 7), the optical system comprising: a light source including a broad light emission area comprising point-like light sources arranged in at least one direction (column 1, lines 54-55, Figure 7, "31" and "32"); a group of lenses (or lens group) (column 1, line 64 – column 2, line 11, Figure 7, "L3" and "WCO") which condenses a light beam emitted from the light source to a surface to be scanned (Figure 7, "40"); an aperture provided on an optical path of the light beam (column 1, lines 58-59, Figure 7, "34") and having an opening in which only a portion of the light beam is transmitted therethrough (column 1, lines 58-61) but does not specifically disclose a magnification changer for changing magnification of the group of lenses. Within the same field of endeavor and also referenced in Genovese (column 2, lines 24-30), Minoura teaches that it is advantageous to incorporate a magnification changer (i.e. anamorphic zoom lens system) in a scanning apparatus for the purpose of increasing angular magnification, while limiting light beam expansion (spot size) (column 3, lines 10-18).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the optical system of Genovese to comprise a magnification changer as claimed since Minoura teaches that it is advantageous to incorporate a magnification changer (i.e. anamorphic zoom lens system) in a scanning apparatus for the purpose of increasing angular magnification, while limiting light beam expansion (spot size).

Allowable Subject Matter

Claims 13 and 17 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach a combination of all the claimed features as presented in independent claim 13: an image recording exposure device as claimed specifically comprising an aperture disposed between positions at which a far-field pattern is formed by emitted light beams, wherein exposure lenses include lenses for changing the magnification disposed between the aperture and light sources.

The prior art fails to teach a combination of all the claimed features as presented in independent claim 17: an image recording exposure device as claimed specifically comprising an aperture disposed between positions at which a far-field pattern is formed by emitted light beams and an opening area changer which changes area of an aperture in accordance with magnification.

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Claims 2-4, 8-10, 14-16 and 18-20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach a combination of all the claimed features as presented in claims 2-4 and 8-10: an optical system as claimed in claims 1 and 7 respectively specifically further wherein an aperture is disposed at a far-field pattern of the multiple light beams.

The prior art fails to teach a combination of all the claimed features as presented in claims 14-16: an image recording exposure device as claimed specifically further wherein the aperture is maintained at a substantially constant distance from the light sources; or wherein the aperture is maintained at a substantially constant distance from the exposure surface; or wherein the aperture is non-circular.

The prior art fails to teach a combination of all the claimed features as presented in claims 18-20: an image recording exposure device as claimed specifically wherein the opening changer comprises a mechanism which is mechanically linked with the magnification changer; or wherein the aperture is maintained at a substantially constant distance from the light sources; or wherein the aperture is maintained at a substantially constant distance from the exposure surface.

Claims 5, 6, 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach a combination of all the claimed features as presented in claims 5 and 11: an optical system as claimed in claims 1 and 7 respectively specifically further wherein the group of lenses comprises one lens group movable along an optical axis direction for changing the magnification, with the aperture disposed downstream of said one lens group relative to the optical path.

The prior art fails to teach a combination of all the claimed features as presented in claims 6 and 12: an optical system as claimed in claims 1 and 7 respectively specifically further wherein the group of lenses comprises one lens group movable along an optical axis direction for changing the magnification with the area of the aperture opening changing in accordance with the magnification.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takayama (U.S. 6,459,520 B1) is being cited herein to show an optical scanning apparatus that comprises the structural limitations of claims 1 and 7, however, further rejections would have been repetitive.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (703) 305-


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3100. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (703) 308-4883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

W.C.
William Choi
Patent Examiner
Art Unit 2873
October 28, 2002


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800